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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/217,873	12/21/1998	MARK RAPAICH	450.221US1	3830

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EXAMINER

NATNAEL, PAULO S M

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/217,873

Applicant(s)

RAPAICH, MARK

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. Claims **1-3,5-8, 10** are **again** rejected under 35 U.S.C. 102(e) as being anticipated by Aleksic et al., U.S. Pat. No. 6,020,921.

Considering claim **1**, Aleksic discloses all claimed subject matter, note;

A) the claimed video source capable of providing a digital YUV video signal is met by Frame buffer 1 and VIDEO IN (FIG 2), which “apply a YUV signal to a gamma correction circuit 3....” (col 2, lines 64-65)

B) the claimed video output capable of connecting to a video display device is met by the output of D/A 9 to the CRT 11 (FIG.2).

C) the claimed digital processor **computationally** employing a corrective algorithm that applies gamma correction to the digital YUV signal provided by the video source and provides a corrected signal to the video output is met by gamma correction circuit 3 (FIG.2). (See also disclosure of a software-implemented embodiment on col.5, lines 57-67 to col.6, lines 1-35)

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Considering claim 2, the claimed wherein the digital processor further employs a corrective algorithm that corrects at least one of color saturation correction, tint correction, brightness correction and contrast correction, is **inherent**, because all personal computers and other types of displays have brightness correction, for example.

Considering claim 3, the claimed software module for user configuration of the digital processor that corrects the digital YUV signal;

Regarding claim 3, see rejection of claim 1(C).

Considering claim 5, the claimed wherein the digital YUV video signal is encoded with a correction factor that is compensated for in applying the corrective algorithm to the digital YUV signal is met by the disclosure that "the gamma correction value 0.45, 1/1.8 and 1/1.4" is given as QUAL_GAMMA_SEL . (col. 5, lines 65 through col.6, line 35) (See also discussion in Cols. 3-5)

Considering claim 6, Aleksic discloses all claimed subject matter, note;

a) the claimed process of receiving a YUV digital video signal is met by LIMIT Y 5 (FIG 2), which receives the YUV signal applied by VIDEO IN and FRAME BUFFER 1 that "apply a YUV signal to a gamma correction circuit 3...." (col 2, lines 64-65)

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b) the claimed process of **computationally** applying gamma correction to the digital YUV signal within a personal computer is met by the gamma correction circuit 3 (FIG.2). (See also disclosure of an software-implemented embodiment on col.5, lines 57-67 to col.6, lines 1-35)

c) the claimed process of providing a corrected digital YUV signal to an output for connection to a display device is met by the output of gamma correction 3 to conversion circuit 9 (FIG.2).

Considering claim 7, see rejection of claim 2.

Considering claim 8, see rejection of claim 3.

Considering claim 10, see rejection of claim 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 9 are **again** rejected under 35 U.S.C. 103(a) as being unpatentable over Aleksic et al., U.S. Pat. No. 6,020,921.

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Considering claim 4, Aleksic discloses all claimed subject matter, except for;

a) the claimed wherein the video sources comprise multiple sources selected from the group consisting of MPEG, ~~NTSC~~, CVD, CD.

Regarding a), Aleksic discloses a gamma correction circuit for **multimedia**. Therefore, it would have been obvious to the skilled in the art to readily recognize the teachings of Aleksic, because the multimedia reference includes the claimed sources of video such as the MPEG standard, NTSC, DVD, and CD.

Considering claim 9, see rejection of claim 4.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Aleksic et al.**, U.S. Pat. No. 6,020,921 in view of **Warren et al.**, U.S. Pat. No. 6,304,300.

Considering claim 11, Aleksic et al. disclose the following claimed subject matter, note

B) the claimed video source capable of providing a digital YUV video signal is met by Frame buffer 1 and VIDEO IN (FIG 2), which “apply a YUV signal to a gamma correction circuit 3....” (col 2, lines 64-65)

C) the claimed video output capable of connecting to a video display device is met by the output of D/A 9 to the CRT 11 (FIG.2).

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D) the claimed digital processor employing a corrective algorithm that applies gamma correction to the digital YUV signal provided by the video source and provides a corrected signal to the video output is met by gamma correction circuit 3 (FIG.2). (See also disclosure of a software-implemented embodiment on col.5, lines 57-67 to col.6, lines 1-35)

Except for;

A) the claimed personal computer system comprising a processor, a bus, a main memory, a system controller, and graphics controller.

Regarding a), Aleksic et al. does not disclose the listed items. However these items are well known in the art of any personal computer (PC) systems. A PC would not function as a computer without a processor, memory or graphics controller.

In that regard, Warren et al. discloses a floating point **gamma correction** method and system in which Warren illustrates a block diagram (FIG.8) of a **computer graphics system** [which is exemplary only in that the invention can operate within a number of different computer system configurations] within which the invention may be implemented or practiced. (Col. 9. Lines 50- 60) Warren's computer graphics system (FIG.8) includes, inter alia, a processor, a bus, a main memory, a graphics subsystem.

Accordingly, therefore, it would have been obvious to one of ordinary skill in the art to add Warren's teachings of the computer graphics system within which the gamma correction would be implemented in the system of Aleksic et al. in view of their related performance and the resulting expectation of similar gamma corrected output.

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Response to Arguments

6. Applicant's arguments filed Feb. 25, 2002 have been fully considered but they are not persuasive.

7.

Applicant's Argument

“An application of algorithm in a computer by definition includes computational calculation.... It is now believed to be clear that the pending claims recite that the gamma correction algorithm is applied by computational calculation...”

Examiner's Response

Merriam Webster's Collegiate Dictionary (tenth edition), Computation is defined as, a)the act or action of computing: CALCULATION, b)the use or operation of a computer.

As was indicated in the previous action, Aleksic does not explicitly use the word **algorithm**. Nevertheless, the corrective function of the digital gamma correction circuit 3 is clearly disclosed and amply described in the '921 patent. Aleksic uses **calculations** to correct the gamma using the gamma correction circuit 3. Hence, again, this particular argument is unpersuasive.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kitagawa et al., U.S. Patent # 6,278,496 discloses a digital gamma correction circuit and image data processing apparatus equipped with a digital correction circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Paulos Natnael** whose telephone number is **(703) 305-0019**. The examiner can normally be reached on **Monday through Thursday** from **8:00 a. M. to 5:00 p.m.** The examiner can also be reached on alternate **Fridays**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John Miller**, can be reached on **(703) 305-4795**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is **(703) 305-3900**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 872-9314, (for formal communications intended for entry)

or:

(703)872-9314 (for informal or draft communications, please label "PROPOSED" OR "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A. Sixth Floor (Receptionist).

Paulos M. Natnael

March 24, 2002

PMN



**JOHN W. MILLER
PATENT EXAMINER**